

In the Claims

1. (Previously presented) An in-office wireless code division multiple access, CDMA, communication system, comprising:

a local area network, LAN, having an ethernet communication back-bone;
a plurality of CDMA wireless base stations coupled to said ethernet communication back-bone;

a wireless internet server coupled to said ethernet communication back-bone;

a plurality of wireless communication devices coupled to said CDMA wireless base stations, wherein the CDMA wireless base stations are operable to negotiate a handoff of a connection with one of the wireless communication devices from a first CDMA wireless base station to a second CDMA wireless base station using the ethernet communication back-bone;

a communication gateway coupled to said ethernet communication back-bone;

a router coupled to said ethernet communication back-bone to enable said communication devices to communicate to the internet; and

a plurality of repeaters coupled to said ethernet back-bone and operable to repeat signals from the wireless communication devices to increase ranges of the CDMA wireless base stations;

wherein negotiating the handoff of the connection from the first CDMA wireless base station to the second CDMA wireless base station is based on the increased ranges of the CDMA wireless base stations when the signals from the wireless communication devices are being repeated.

2. (Previously presented) The system as recited in Claim 1, wherein said wireless base station includes a plurality of CDMA wireless modem modules for providing a communication link to external wireless communication devices to the in-office wireless communication system.

3. (Previously presented) The system of Claim 2, wherein said wireless base station further includes a call processing module for processing calls received and originated from said wireless base station.

4. (Previously presented) The system of Claim 3, wherein said call processing module formats call signals received by said wireless base station into data packets adaptable for the ethernet communication back-bone.

5. (Previously presented) The system of Claim 3, wherein said wireless base station further includes an inter-networking processing module for providing a communication channel between the internet and a wireless communication unit coupled to said ethernet communication back-bone.

6. (Original) The system of Claim 1, wherein said wireless internet server includes a wireless mobility module for managing mobile units within the system.

7. (Original) The system of Claim 1, wherein said wireless internet server provides real-time call processing.

8. (Previously presented) The system of Claim 5, said wireless internet server includes an integrated base station controller module and a mobile switch controller module for managing calls between communication units within the system.

9. (Previously presented) The system of Claim 1, wherein the wireless internet server includes a call manager processing module for managing calls received and calls originated from the in-office wireless communication system.

10. (Previously presented) A wireless office communication solution system, comprising:

an ethernet communication pathway;

a plurality of wireless base stations coupled to said ethernet communication pathway to receive and originate wireless communication traffic over said communication pathway, wherein the wireless base stations are operable to negotiate a handoff of a connection with a wireless communication device from a first wireless base station to a second wireless base station using the ethernet communication pathway;

a wireless internet server coupled to said communication pathway to receive and manage wireless communication traffic over said communication pathway; and

a plurality of repeaters coupled to said communication pathway and operable to repeat signals from the wireless communication device to increase ranges of the wireless base stations;

wherein negotiating the handoff of the connection from the first wireless base station to the second wireless base station is based on the increased ranges of the wireless base stations when the signals from the wireless communication device are being repeated.

11. (Previously presented) The system of Claim 10, further including a communication gateway coupled to said communication pathway for providing communication formatting logic for transmitting a wireless call generated in the wireless base station to a public switch telephone network system.

12. (Previously presented) The system of Claim 10, wherein the wireless base station includes call selection modules for determining whether a call received or originated from the wireless base station is a voice call or a data call.

13. (Previously presented) The system of Claim 10, wherein the wireless base station includes a call processing module for formatting wireless calls received by the wireless base station into formats adaptable for transmission on the ethernet communication pathway.

14. (Previously presented) The system of Claim 10, wherein the wireless base station further includes a communication interface for providing communication protocols to enable the wireless base station to communicate over the ethernet communication pathway.

15. (Previously presented) The system of Claim 10, wherein the wireless base station further includes a plurality of inter-networking functional modules for providing a communication channel between the wireless base station and the internet.

16. (Previously presented) The system of Claim 10, wherein the wireless internet server includes call manager modules for handling calls processed by the wireless base station for transmission over the ethernet communication pathway.

17. (Previously presented) The system of Claim 16, wherein the wireless internet server further includes a communication interface module for providing communication protocol to allow the wireless internet server to communicate over the ethernet communication pathway.

18. (Previously presented) A code division multiple access, CDMA, communication system having a plurality of integrated wireless base stations, WIBS, having an integrated base station controller and a mobile switch controller function, the WIBS comprising:

a plurality of CDMA modems coupled to modulate and demodulate radio signals provided to said WIBS by a mobile communication unit;

a call processing module coupled to receive and process calls by said WIBS;

a plurality of interworking function modules coupled to said call processing module to process voice and data calls received by said WIBS; and

a network interface unit coupled to said plurality of interworking function modules to format calls processed in said WIBS for delivery over an ethernet back-bone, wherein the CDMA modems are further operable to negotiate a handoff of a connection with the mobile communication unit from a first CDMA modem to a second CDMA modem using the ethernet back-bone based on increased ranges of the WIBS when signals from the mobile communication unit are being repeated by repeaters coupled to said ethernet back-bone.

19. (Previously presented) The WIBS of Claim 18, wherein the call processing module includes call processing logic for processing calls received by the WIBS.

20. (Previously presented) The system of Claim 19, wherein the call processing module further includes call selection and distribution logic for selecting and distributing calls to and from a mobile unit to the WIBS during a forward link and a reverse link.

21. (Previously presented) The system of Claim 18, wherein the plurality of IWFs includes a call IWF for handling voice calls received by the WIBS.

22. (Previously presented) The system of Claim 18, wherein the plurality of IWFs includes a data IWF for handling data calls received by the WIBS.

23. (Previously presented) The system of Claim 18, wherein the network interface module packetizes calls processed by the WIBS into data packets adaptable for transmission within an internet protocol transmission medium.

24. (Previously presented) The system of Claim 20, wherein the call selection and distribution logic enables the WIBS to communicate with other WIBSs coupled to the communication system.

25. (Previously presented) The system of Claim 18, wherein the plurality of modems receive CDMA data.

26. (Previously presented) A wireless office communication solution system, comprising:

an ethernet communication pathway;

a plurality of wireless base stations coupled to said ethernet communication pathway to receive and originate wireless communication traffic over said communication pathway, wherein the wireless base stations are operable to negotiate a handoff of a connection with a wireless communication device from a first wireless base station to a second wireless base station using the ethernet communication pathway;

a wireless internet server coupled to said communication pathway to receive and manage wireless communication traffic over said communication pathway; and

a plurality of repeaters coupled to said ethernet communication pathway and operable to repeat signals to increase ranges of the wireless base stations;

wherein negotiating the handoff of the connection from the first wireless base station to the second wireless base station is based on the increased ranges of the wireless base stations when the signals are being repeated.

27. (Previously presented) The system of Claim 26, further including a communication gateway coupled to said communication pathway for providing communication formatting logic for transmitting wireless calls generated in the wireless base station to a public switch telephone network system.

28. (Previously presented) The system of Claim 26, wherein the wireless base station includes call selection modules for determining whether a call received or originated from the wireless base station is a voice call or a data call.

29. (Previously presented) The system of Claim 26, wherein the wireless base station includes a call processing module for formatting wireless calls received by the wireless base station into formats adaptable for transmission on the ethernet communication pathway.

30. (Original) The system of Claim 26, wherein the plurality of repeaters provides a wider horizontal and vertical wireless in-building aerial coverage.

31. (Currently amended) A method for communicating with wireless devices, comprising:

initiating a communication session between a wireless communication device and a first wireless base station coupled to a local area network (LAN) having an ethernet communication pathway;

repeating signals from the wireless communication device to increase a range of the first wireless base station;

negotiating a handoff of the communication session from the first wireless base station to a second wireless base station using the ethernet communication pathway based on increased ranges of the wireless base stations when the signals from the wireless communication device are being repeated; and

handing off the communication session from the first wireless base station to the second wireless base station.

32. (Previously presented) The method of Claim 31, wherein the wireless communication device communicates wirelessly using code division multiplex access (CDMA).

33. (Previously presented) The method of Claim 31, further comprising:
providing the wireless communication device with access to the Internet using an inter-networking device coupled to the ethernet communication pathway; and
maintaining the Internet access during the handoff of the communication session.

34. (Previously presented) The method of Claim 31, further comprising providing the wireless communication device with access to the public switched telephone network.

35. (Canceled)

36. (Currently amended) Logic embodied in a computer readable medium operable to perform the steps of:

initiating a communication session between a wireless communication device and a first wireless base station coupled to a local area network (LAN) having an ethernet communication pathway;

repeating signals from the wireless communication device to increase a range of the first wireless base station;

negotiating a handoff of the communication session from the first wireless base station to a second wireless base station using the ethernet communication pathway based on increased ranges of the wireless base stations when the signals from the wireless communication device are being repeated; and

handing off the communication session from the first wireless base station to the second wireless base station.

37. (Previously presented) The logic of Claim 36, wherein the wireless communication device communicates wirelessly using code division multiplex access (CDMA).

38. (Previously presented) The logic of Claim 36, further operable to perform the step of:

providing the wireless communication device with access to the Internet using an inter-networking device coupled to the ethernet communication pathway; and

maintaining the Internet access during the handoff of the communication session.

39. (Previously presented) The logic of Claim 36, further operable to perform the step of providing the wireless communication device with access to the public switched telephone network.

40. (Canceled)

41. (Currently amended) A system, comprising:

means for initiating a communication session between a wireless communication device and a first wireless base station coupled to a local area network (LAN) having an ethernet communication pathway;

means for repeating signals from the wireless communication device to increase a range of the first wireless base station;

means for negotiating a handoff of the communication session from the first wireless base station to a second wireless base station using the ethernet communication pathway based on increased ranges of the wireless base stations when the signals from the wireless communication device are being repeated; and

means for handing off the communication session from the first wireless base station to the second wireless base station.